

**ABSTRACT**

This invention provides independent measurement of and dynamic correction for subject movement while a scanning protocol is performed by updating the scanning protocol to compensate for this movement. This simple, easy-to-use, and cost-effective approach offers greater accuracy than previous methods. Using devices with cameras and integrated radiation sources, the invention is suitable for monitoring subject movement by detecting the reflection of the radiation from markers on the subject in real-time and performing dynamic correction for this movement.

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